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Claims.

1. An image processing system including a linear array of detectors (1) imaged onto
a scene of interest and an image store for receiving signals from the linear array
5   when a detected object (2) passes through the scene;

characterised by:

a plurality of linear arrays (1a-d) spaced substantially parallel to one another to image
10 a plurality of areas (4) of interest in a scene; and

a signal processor (7, 16, 17, 18) for detecting images received by the plurality of
arrays and determining direction and speed of movement detected.

15 2. The system of claim 1 wherein the detectors (1) are infra red detectors.

3. The system of claim 1 wherein the detectors (1) are visible light sensitive
detectors.

20 4. The system of claim 1 wherein the detectors (1) are mm wave sensitive detectors.

5. The system of any preceding claim wherein each detector element in each array
(1) has associated therewith an independent noise limiting means.

25 6. The system of claim 5 wherein the noise limiting means at each detector element
comprises an independent amplifier and filter (9).

7. The system of any preceding claim wherein each detector array (1) has its output
read out (10) sequentially from each detector element.
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8. The system of any preceding claim wherein the processor (7) is arranged to
determine at least one of detected object range, direction of movement, speed, true
direction of travel, object type.

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9. The system of any preceding claim including an additional two-dimensional detector array system (11, 12) which may be switched on when an object (2) is detected.

5   10. The system of any preceding claim wherein several systems are combined into a single unit arranged to give about 360° of azimuthal coverage.

11. The system of any preceding claim wherein outputs from the signal processor are communicated to remote monitoring stations.

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12. The system of any preceding claim wherein the processor performs the algorithm of at least Figure 9 or Figure 10.